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AUTHOR Fujioka, Noriko; Kennedy, John J.
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ABSTRACT

A study investigated college student attitudes toward different classroom techniques for error correction in second language instruction. Subjects were 162 students of Japanese as a second language in seven universities. In the first phase of the study, a smaller group of students at a liberal arts college were observed in class, interviewed, and surveyed. Based on the findings, a mail survey of the larger sample was conducted. Three conclusions resulted: (1) teacher correction of errors is the dominant type; (2) self-correction is perceived as having a different nature than peer or teacher correction; and (3) class status (freshman, sophomore, etc.) and class size are key factors in preference for self-correction or teacher correction of errors. Contains 12 references. (MSE)

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The Views of Non-Native Speakers of Japanese Toward Error Treatment in Japanese Introductory College Classes

Noriko Fujioka
The Ohio State University
University of Cincinnati

John J. Kennedy
The Ohio State University

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Abstract

This study attempted to investigate the effect of error treatment in second language classrooms in qualitative and quantitative methods. The purposes of this study are: (1) to assess student preference of error treatment in Japanese classes for non-native speakers of Japanese and (2) to attempt a reconciliation of qualitative research and quantitative research. The first phase was conducted with a small sample in a liberal arts college. This phase consists of three parts: classroom observations, interviews, and a survey. In the second phase, a "grounded" survey instrument, developed based on the findings emanating from the first phase, was mailed to students in seven universities. In total, 162 subject responses were analyzed, so that students' preferences of error correction sources could be identified. The results of the statistical analyses indicate three conclusions. First, teacher correction is the most key indicator of error treatment. Second, self-correction possesses a different nature from teacher or peer correction. Third, class status and class size are key factors in self-correction and teacher correction. However, the precise examinations of the results in this study are ambiguous. For example, this study could not investigate the nature of peer correction sufficiently. Since enormous complexity is involved in the processes of error treatment in language classrooms, a further study in the perspectives from psychology as well as students' educational status is necessary.

Introduction

The effect of error treatment in the second language classroom is extremely difficult to verify. Numerous studies have been conducted on errors, from the perspective of linguistical error analysis to that of affective factors.

The studies supporting the importance of affective factors in language learning and that of data collection in the natural setting seem not to encourage explicit error correction. For example, Baltra (1992) reviewed the views of error correction. He supported Terrell's Natural Approach based on the affective filter hypothesis supported by Krashen's non-interface position. Therefore, he rejects the rigorous error correction underlined in the hard perspective of Corder's notion (1967).

Klinck (1984) collected data from peer conversation in a natural setting. She found more than thirty peer corrections made by the ninth graders by themselves in the tape-recording, after the researcher left the room. However, the errors corrected during the recording were only semantic errors.

Error treatment made in the social world involve qualitative aspects. Therefore, the lack of interactional context in the error analysis study is less valid in the classroom-oriented studies. However, it should be noted that Klinck's (1984) study was conducted in a natural setting. Classroom learning consists of a different kind of climate, such as competitiveness or dependence. In the perspective of input and feedback, the amount of exposure in the classroom setting is less than one in the

natural environment (e.g., Boulouffe, 1986; Horner, 1988).

Klinck (1984) observed that many peer corrections were made voluntarily among students only, so that they can obtain the correct meanings. However, van Lier (1988) analyzed transcriptions from recordings made in the language classroom and found that peer corrections are more troublesome than teacher corrections, since, in teacher-led sequences, intra-turn pauses tend to occur predominantly before and not after trouble sources, while intra-turn pauses occur both before and after trouble sources in group and pair-work.

From these perspectives, this study investigated students' preference of the source of corrections, as well as the groups or types of students, according to the preference of three sources of correction variables.

The design of this study employed both qualitative and quantitative methods so as to enhance the depth and breadth of potential results. Pliska (1996) claimed that the affective results obtained from qualitative methods often can provide analysts with a deeper understanding of empirical results observed from surveys and other traditional methods. Specifically, Pliska (1996) advocated the *a priori* "triangulation of the data", the informed use of information from observations, interviews, and a review of the documentation prior to the administration of survey instruments, so that an "inner perspective" at the local level can be integrated into the results of the entire survey.

Although Silverman (1993) claimed that data triangulation and

member validation are inappropriate to validate qualitative research, he demonstrated the use of quantification in qualitative research. Also, though postpositivism researchers have difficulty accepting positivism notions of validity and reliability, nevertheless Silverman (1993) points out that the judicious utilization of quantification can provides the readers of the results of the study with a greater overview and grasp of the data, as well as the ability to generalize resultant findings to a larger population.

Thus, in this study, the suggestions of both Pliska (1996) and Silverman (1993) were adopted. There were, in fact, two distinct phases in this study.

Phase One: This phase was conducted at a private liberal arts college in Ohio, and consisted of three parts:

1. Conducting focused observations (4 times).
2. Conducting in-depth interviews as member checks also (4 students).
3. Constructing and administering the grounded survey (4 students).

Based on the findings of these steps, the grounded survey was constructed and administered to the subjects of the first phase.

Phase Two: Based on the findings emanating from the steps in the first phase, a "grounded" survey instrument was developed and mailed to students in seven universities. In all, 162 subject responses were analyzed. The responses to the Phase-Two survey

were subjected to a variety of log-linear and configural frequency analyses (e.g., Kennedy, 1992; von Eye, 1990) in an effort to document both effects and relationships among teacher, self-, and peer corrections. In particular, configural frequency analyses were performed to identify the types of students who prefer each source of error correction.

Data Analysis

Variables of three sources of error correction are:

1. Teacher [T], 2. Self [S], 3. Peers [P].

Variables of types of students are:

A. Class status: 1. Freshman & Sophomore, 2. Junior, Senior, & others.

It is noted that most of the subjects who are taking Japanese at the first-year level as a language requirement are freshmen and sophomores.

B. GPA: 1. above 3.7, 2. between 3.0 and 3.69, 3. below 2.9.

The GPAs of the majority of the subjects belong to Category 2 (between 3.0 and 3.69).

C. Class size: 1. Less than 9 students, 2. More than 10 students.

The results of log-linear analyses are reported in this study are:

1. Three dimensions (i.e., teacher x self x peers).
2. Four dimensions
   - teacher x self x peers x class status [A].

- teacher x self x peers x GPA [B].
- teacher x self x peers x class size [C].

The results of configural frequency analyses as reported in this study are:

1. The classical form of configural frequency analyses;
   The responses on three sources of error correction variables are analyzed with each type of student separately; i.e., teacher (yes or no) x self (yes or no) x peers (yes or no) for each type of student (e.g., Freshman and Sophomore [A1], or above 3.7 GPA [B2]).
2. Prediction configural frequency analysis;
   i) The group of predictors (A):
      Class status (1), GPA (2), class size (3).
      The group of criteria (B):
      Teacher (1), self- (2), peer corrections (3).
   ii) The group of predictors (A): same as above.
      The group of criteria (B):
      either "yes" (1) or "no" (2) of teacher correction.
   iii) The group of predictors (A): same as above.
      The group of criteria (B):
      either "yes" (1) or "no" (2) of self correction.
   iv) The group of predictors (A): same as above.
      The group of criteria:
      either "yes" (1) or "no" (2) of peer correction.

The results of logit-model analyses as reported in this paper consists of the responses of the types of students analyzed with each source of error correction variable, i.e., class status x GPA x class size within each source of error correction (the preference for teacher correction, self-correction, and peer correction).

Null Hypotheses of the data analyses in this study are:

1. There is no difference in students' preference of error correction from any source (teacher, self, peers).
2. There is no attitude difference toward error correction regardless of type of student (class status, GPA, class size).

Some educators have tended to suggest that teacher dominant correction be avoided. This study investigates whether students prefer teacher correction or not, and whether there are any different preferences, depending on the type of students. Actually, during Phase One of this study, the students' preference toward error correction was very positive. During the interviews, the attitudes of all students toward error correction from any source were positive. However, the results of the anonymous survey showed that there is a tendency for students to dislike peer correction. Therefore, it can be assumed that peer correction is not as preferable as teacher correction.

Results

The statistical analyses performed in this study suggest three indications. First, symmetrical log-linear analyses showed that teacher correction is the key indicator of error treatment. Second, self-correction possesses a different nature from teacher or peer correction, according to the results of three- and four-dimensional log-linear analyses, and first-order configural frequency analysis. Third, although the different types of students do not make a statistically significant differentiation between attitudes toward error treatment, class status and class size are key factors in self-correction and teacher correction. It seems that the freshmen's and sophomores' attitudes toward self-correction are more positive than those of juniors, seniors, and others, and that the students in small classes like teacher correction more than those in big classes.

Table 1 shows the overall observed frequency of error corrections by three sources--teacher, self, and peers--and also by the three types of students (class status, GPA, class size). It shows that teacher correction is the most dominant source (affirmative response to teacher correction is 150, while negative response is only 10). As expected from the results of the grounded survey in Phase One of this study, attitudes toward peer correction are negative. The affirmative response to peer correction (76 responses) is less than the negative response (86 responses).

The symmetrical log-linear analyses support the first finding

reviewed from Table 1. The three and four dimensional log-linear analyses showed that most of the results obtained the statistical significance of the association of teacher correction and peer correction.

Table 2 shows that the main effects of teacher correction and self correction, and the association of teacher correction and peer correction are statistically significant ($p < .05$) by the performance of three dimensional log-linear analysis. No statistical significance of associations was obtained by the three types of four dimensional log-linear analyses to examine the relationships between three sources of error corrections and each type of students, class status, GPA, and class size. Yet, the results of these analyses also indicated the association between teacher correction and peer correction.

Since initial screening has suggested that the main-marginal terms for the variables T and S and the first-order term for TP are salient, the model including the variables T, S, and TP was examined. The results of this hierarchical model are that the residual chi-square component is 4.056 ($p = .256$) and the AIC is 14.056. If the variable SP is included in the above model, the residual chi-square component is 1.331 ($p = .512$) and the AIC is 13.331. Judging from the values of AIC, the variable SP shows a better association between self-correction and peer correction than between teacher correction and peer correction. However, the examination of lambda parameters for the TP term reveals the value $\pm$ 1.086. This is almost statistically significant $\pm z = 1.90$. On

the other hand, the lambda parameter for the SP term is $\pm$ .268. The approximate Z tests on these parameter estimates are statistically insignificant, $\pm$ z = 1.76. The p values of association of two sources of correction by four dimensional log-linear analysis, involving types of students, class status, GPA, and class size, are p = .0570, p = .00767, and p = .0570, respectively.

The second main finding of this study concerns the nature of self correction as distinguished from corrections by other sources. As discussed above, by showing the results of three- and four- dimensional log-linear models for the error treatment data, there is an association between teacher correction and peer correction. This finding is supported by the indication of first-order configural frequency analysis.

Although Table 3 shows that the p values of Z tests are far from the statistically significant values of the Bonferroni adjusted alpha, α^* = .00625, the configuration NYN constitutes a type in the freshman and sophomore group. Therefore, the group of freshmen and sophomores who are taking first-year Japanese tend to prefer self-correction, and dislike teacher and peer corrections.

The third main finding involves the difference among the attitudes toward error treatment depending on the class size. Logit-model analysis did not show any statistical significance. It indicated that types of students do not differentiate between attitudes toward error treatment. However, careful examination of

the results of prediction configural frequency analysis and first-order configural frequency analysis show different attitudes of students, depending on class status and class size.

Prediction and first-order configural frequency analyses suggest that large class size groups tend to dislike teacher correction more than small class size groups, and that the lower class status group likes self-correction more than the higher class status group. A precise examination of Table 4 shows that the configuration YNY of the predictor criterion--junior, senior, and others whose GPAs are between 3.0 and 3.69 enrolled in small classes--constitutes an almost statistically significant type by Z test ($p = .01727$). Furthermore, the configuration NNY of the group of higher class status, the middle GPA, and the large class size constitutes a close statistically significant antitype ($p = .01962$).

The first-order configural frequency analysis, shown in Table 3, yields two different perspectives. However, only the perspective that the higher class status prefers self-correction is supported by prediction configural frequency analysis whose predictor variable is freshmen and sophomores with high GPAs enrolled in small classes. Table 5 shows that this criterion category constitutes an antitype of the negative attitude toward self-correction, though it also does not achieve statistical significance ($p = .02414$).

In contrast with the findings for a group of small class size in Table 4, first-order configural frequency analysis of three

sources of error treatment within the big class size group indicates negative attitudes toward teacher correction. Table 6 shows that configuration YYN constitutes an antitype, though again it is not statistically significant ($p = .04270$).

Lastly, this first-order configural frequency analysis, shown in Table 6, indicated that students enrolled in big classes might prefer peer correction. Since four dimensional logit-model analysis of error treatment by self-correction obtained statistical significance from the association between class status and class size ($L = 11.72$, $p < .001$), higher class status students tended to belong to big classes. Such an indication opposes the assumption at the end of Phase one that peer correction is not perceived favorably in large classes.

Discussion

Overall, positive attitudes toward teacher correction were obtained, though some educators have suggested the use of alternative approaches; in particular, some educators have advocated that peer correction is preferable (e.g., Cohen, 1975). The results of precise examination of analyses performed in this study showed different attitudes toward error treatment, depending on the types of students. It was found that class status determines the preference for self-correction and that attitudes toward teacher correction are different by class size.

The lower class status students prefer self-correction. Students in smaller classes like teacher correction more than students in bigger classes. This can be explained by affective

factors such as loss of face, the intimacy of a teacher as well as fellow students, or competitiveness with fellow students. Since the method of teachers' cues are closely related to the achievement of learner self-correction (Makino, 1993), more detailed study on self-correction is necessary.

Although the association of teacher correction and peer correction was revealed, the nature of peer correction was not investigated sufficiently in this study. The only finding on peer correction was that the attitudes of students in big classes were not negative. It can be considered that this finding contradicts the assumption in Phase One that peer correction is not as preferable as teacher correction because of differences in class size. As shown, the subjects of higher class status tended to be enrolled in bigger classes. Yet, most subjects of Phase One were of lower class status. Thus, the assumption derived from the results of Phase One would contradict those of the analysis in Phase Two.

It has been noted that error treatment in language classrooms is often inconsistent and ambiguous (Allwright, 1975; Fanselow, 1977; Long, 1977). This is because the processes of error treatment in language classrooms involve enormous complexity. Therefore, to see the consistency of this study, further, more precise study should be conducted, which takes into consideration not only educational status variables such as class level, GPA, and class size, but also how students' psychological individual learning styles influence attitudes toward error treatment, so

that the most effective methods for correcting errors can be ascertained.

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Table 1

Frequency of Error Corrections by Three Sources and by Types of Students

Type			Source			
Class Status	GPA	Class Size	Teacher	Self	Peer	
					Yes	No
Low (1)	High (1)	Small (1)	Yes	Yes	8	10
				No	0	1
			No	Yes	1	0
				No	0	0
		Big (2)	Yes	Yes	2	1
				No	1	1
			No	Yes	0	0
				No	0	0
	Mid (2)	1	Yes	Yes	13	17
				No	3	7
			No	Yes	0	3
				No	0	0
		2	Yes	Yes	7	6
				No	0	2
			No	Yes	0	2
				No	0	0
	Low (3)	1	Yes	Yes	12	6
				No	3	4
			No	Yes	0	2
				No	0	0
		2	Yes	Yes	3	1
				No	0	1
			No	Yes	0	1
				No	0	0
High (2)	1	1	Yes	Yes	2	3
				No	0	0
			No	Yes	0	0
				No	0	0
		2	Yes	Yes	4	1
				No	0	0
			No	Yes	0	0
				No	0	0

Table 1 (Continued)

Frequency of Error Corrections by Three Sources and by Types of Students

Type			Source			
Class Status	GPA	Class Size	Teacher	Self	Peer	
					Yes	No
2	2	1	Yes	Yes	1	5
				No	3	1
			No	Yes	0	0
				No	0	0
		2	Yes	Yes	5	0
				No	2	4
			No	Yes	1	1
				No	0	1
	3	1	Yes	Yes	4	3
				No	0	1
			No	Yes	0	0
				No	0	0
		2	Yes	Yes	1	1
				No	0	0
			No	Yes	0	9
				No	0	1

Table 2

Adequacy-of-Fit of General Log-Linear Models for the Error Treatment Data

	Residual			Component			
Model	L	df	p	AIC	L	df	p
(1)	197.02	7	.000	199.03			
(2) T	62.93	6	.000	66.93	134.10	1	.000
(3) S	8.94	5	.111	14.94	53.98	1	.000
(4) P	8.34	4	.080	16.34	0.60	1	.438
(5) TS	7.72	3	.052	17.72	1.08	1	.298
(6) TP	3.44	2	.180	15.44	4.75	1	.029
(7) SP	0.25	1	.619	14.25	3.19	1	.074
(8) TSP	0.00	0	1.000	16.00	0.25	1	.619

Table 3

First-order CFA of Three Sources of Error Treatment by Lower Class Status (A1)

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
YYY	45	39.49	1.07	.14171	
YYN	41	47.53	-1.22	.11082	
YNY	7	9.98	-0.99	.16218	
YNN	16	12.01	1.21	.11233	
NYY	1	3.62	-1.40	.08098	
NYN	8	4.36	1.78	.03786	T
NNY	0	0.92	-0.96	.16780	
NNN	0	1.10	-1.05	.14601	

Table 4

Prediction CFA of the Predictors Student Type and Criteria Method of Error Correction

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
11	6	7.15	0.33	.37054	
12	10	6.33	1.51	.06561	
13	0	1.72	-1.32	.09285	
14	1	2.90	-1.13	.12862	
15	1	1.01	-0.01	.49601	
16	0	1.72	-1.32	.09285	
17	0	0.78	-0.89	.18760	
18	0	0.78	-0.89	.18760	
21	2	3.00	-0.59	.27674	
22	1	2.65	-1.03	.15200	
23	1	0.72	0.33	.37024	
24	1	1.22	-0.21	.42056	
25	0	0.43	-0.66	.25552	
26	0	0.72	-0.85	.19718	
27	0	0.33	-0.58	.28249	
28	0	0.33	-0.58	.28249	
31	13	13.86	-0.25	.40140	
32	17	12.26	1.45	.07361	
33	3	3.34	-0.19	.42490	
34	7	5.63	0.60	.27589	
35	0	1.97	-1.42	.07607	
36	3	3.34	-0.19	.42490	
37	0	1.51	-1.24	.10775	
38	0	1.51	-1.24	.10775	
41	7	6.19	0.34	.36821	
42	6	5.48	0.23	.40953	
43	0	1.49	-1.23	.10930	
44	2	2.51	-0.33	.37214	
45	0	0.88	-0.94	.17299	
46	2	1.49	0.42	.33685	
47	0	0.67	-0.82	.20571	
48	0	0.67	-0.82	.20571	
51	12	8.43	1.29	.09898	
52	6	7.46	-0.56	.28890	

Table 4 (Continued)

Prediction CFA of the Predictors Student Type and Criteria Method of Error Correction

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
53	3	2.03	0.69	.24569	
54	4	3.42	0.32	.37472	
55	0	1.20	-1.10	.13515	
56	2	2.03	-0.02	.49151	
57	0	0.92	-0.96	.16757	
58	0	0.92	-0.96	.16757	
61	3	2.68	0.20	.42142	
62	1	2.37	-0.90	.18377	
63	0	0.65	-0.81	.20927	
64	1	1.09	-0.09	.46546	
65	0	0.38	-0.62	.26840	
66	1	0.65	0.44	.33156	
67	0	0.29	-0.54	.29483	
68	0	0.29	-0.54	.29483	
71	2	2.68	-0.42	.33677	
72	3	2.37	0.41	.33930	
73	0	0.65	-0.81	.20927	
74	0	1.09	-1.05	.14686	
75	0	0.38	-0.62	.26840	
76	0	0.65	-0.81	.20927	
77	0	0.29	-0.54	.29483	
78	0	0.29	-0.54	.29483	
81	4	2.68	0.82	.20673	
82	1	2.37	-0.90	.18377	
83	0	0.65	-0.81	.20927	
84	0	1.09	-1.05	.14686	
85	0	0.38	-0.62	.26840	
86	0	0.65	-0.81	.20927	
87	0	0.29	-0.54	.29433	
88	0	0.29	-0.54	.29483	
91	1	3.96	-1.52	.06437	
92	5	3.50	0.62	.20702	
93	3	0.95	2.12	.01727	T
94	1	1.61	-0.49	.31390	

Table 4 (Continued)

Prediction CFA of the Predictors Student Type and Criteria Method of Error Correction

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
95	0	0.56	-0.75	.22647	
96	0	0.95	-0.98	.16366	
97	0	0.43	-0.66	.25552	
98	0	0.43	-0.66	.25552	
101	5	4.60	0.19	.42421	
102	0	4.07	-2.06	.01962	A
103	2	1.11	0.85	.19775	
104	4	1.87	1.57	.05786	
105	1	0.65	0.44	.33156	
106	1	1.11	-0.11	.45818	
107	0	0.50	-0.71	.23918	
108	0	0.50	-0.71	.23918	
111	4	3.32	0.38	.35204	
112	3	2.94	0.04	.48582	
113	0	0.80	-0.90	.18455	
114	1	1.35	-0.30	.38080	
115	0	0.47	-0.69	.24596	
116	0	0.80	-0.90	.18455	
117	0	0.36	-0.60	.27388	
118	1	0.36	1.07	.14261	
121	1	2.04	-0.74	.23086	
122	1	1.81	-0.61	.27165	
123	0	0.49	-0.70	.24140	
124	0	0.83	-0.92	.18009	
125	0	0.29	-0.54	.29483	
126	0	0.49	-0.70	.24140	
127	0	0.22	-0.47	.31933	
128	0	0.22	-0.47	.31933	

Table 5

Prediction CFA of the Predictors Student Type and Criterion Method of Self Correction

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
11	19	16.1	0.76	.22316	
12	3	4.6	-0.76	.22458	
13	33	33.6	-0.12	.45372	
14	15	13.8	0.34	.36778	
15	20	21.4	-0.33	.37265	
16	5	5.4	-0.17	.43051	
17	5	4.6	0.19	.42497	
18	5	4.6	0.19	.42497	
19	6	8.4	-0.85	.19755	
110	7	10.7	-1.17	.12091	
111	7	7.6	-0.22	.41179	
112	2	2.3	-0.20	.42104	
21	1	4.9	-1.79	.03680	A
22	2	1.4	0.51	.30527	
23	10	10.4	-0.13	.44899	
24	2	4.2	-1.08	.13837	
25	7	6.6	0.16	.43685	
26	1	1.6	-0.48	.31679	
27	0	1.4	-1.19	.11735	
28	0	1.4	-1.19	.11735	
29	4	2.6	0.88	.19071	
210	6	3.3	1.50	.06659	
211	2	2.4	-0.26	.39738	
212	0	0.7	-0.84	.20088	

Table 6

First-order CFA of Three Sources of Error Treatment by Big Class Size (C2)

Configuration	Frequencies		Significance tests		
	o	e	z	p (z)	Type/antitype
YYY	22	16.24	1.14	.12719	
YYN	10	14.29	-1.72	.04270	A
YNY	3	5.57	-1.33	.09179	
YNN	8	4.90	1.30	.09674	
NYY	1	2.38	-1.12	.13106	
NYN	4	2.09	1.04	.14864	
NNY	0	0.82	-0.98	.16375	
NNN	0	0.72	-0.91	.18202	